International Seabed Authority ISBA/18/C/9

Council

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Periodic review of the implementation of the plans of work for exploration for polymetallic nodules in the Area

Report of the Secretary-General

1. The present report is intended to provide the Council with information on the status and outcome of the periodic reviews of the current contracts for exploration for polymetallic nodules, in accordance with regulation 28 of the Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area.

I. Introduction

2. In accordance with the Regulations, each application for approval of a plan of work for exploration must contain a general description and a schedule of the proposed exploration programme, including the programme of activities for the immediate five-year period, such as studies to be undertaken in respect of the environmental, technical, economic and other appropriate factors that must be taken into account in exploration, and a schedule of anticipated yearly expenditures in respect of the programme of activities for the immediate five-year period (regulation 18, paras. (a) and (f)). Upon approval of the application, the five-year programme of activities is incorporated into each contract for exploration as a schedule to the contract and, in accordance with standard clause 4 of the contract (section 4 of annex 4 to the Regulations), the contractor is contractually bound to commence exploration in accordance with the time schedule stipulated in the programme of activities and shall adhere to such time periods or any modification thereto. Standard clause 4.2 further provides that:

> The Contractor shall carry out the programme of activities set out in schedule 2 hereto. In carrying out such activities the Contractor shall spend in each contract year not less than the amount specified in such programme, or any agreed review thereof, in actual and direct exploration expenditures.

3. The programme of activities may be adjusted at any time by mutual agreement between the contractor and the Authority in accordance with good mining industry

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practice and taking into account market conditions. Regulation 28, however, provides a specific mechanism whereby contractors may adjust their programmes of activities at five-year intervals through a periodic review process undertaken jointly between the Secretary-General and each contractor. In this regard, standard clause 4.4 provides that, not later than 90 days prior to the expiration of each five-year period from the date on which the contract enters into force, the contractor and the Secretary-General shall jointly undertake a review of the implementation of the plan of work for exploration. In the light of the review, the contractor shall indicate its programme of activities for the following five-year period, including a revised schedule of anticipated yearly expenditures, making such adjustments to its previous programme of activities as are necessary. The revised programme of activities is then incorporated into the contract. In accordance with standard clause 24.3, this is done through an instrument in writing (in the form of an exchange of letters) signed by the Secretary-General and the authorized representative of the contractor. Pursuant to regulation 28, the Secretary-General is required to report on the review to the Legal and Technical Commission and to the Council.

4. For six of the current contractors (Yuzhmorgeologiya, the Interoceanmetal Joint Organization, the Government of the Republic of Korea, the China Ocean Mineral Resources Research and Development Association, the Deep Ocean Resources Development Co. Ltd. and the Institut français de recherche pour l'exploitation de la mer), whose contracts were issued in 2001, the second five-year period ended in 2011. In the case of the Federal Institute for Geosciences and Natural Resources of Germany, whose contract was issued in 2006, the first five-year programme of activities expired in 2011. For the Government of India, in respect of which the contract was issued in 2002, the second five-year period ends in 2012. The contractor has submitted information and the periodic review will be carried out during or shortly after the eighteenth session of the Authority.

II. Periodic review process

5. The Secretary-General began the periodic review process in October 2010 by inviting all the contractors to submit, in addition to their annual reports, a comprehensive report of the exploration work carried out to date and data and results obtained, including those data not yet supplied to the Authority. The contractors were also invited to provide a comprehensive breakdown of expenditure incurred during the five-year period under review, in the format recommended by the Legal and Technical Commission in its 2009 recommendations for the guidance of contractors for the reporting of actual and direct exploration expenditures as required by annex 4, section 10, of the Regulations (see ISBA/15/LTC/7). The contractors were further invited to submit their proposed programmes of activities and associated statements of minimum expenditure for the subsequent five-year period. The contractors submitted the relevant information on the dates set out in the annex to the present report and, in all cases, by June 2011.

6. The reports received from the contractors were placed before the Legal and Technical Commission during the Authority's seventeenth session, in 2011. The Commission considered the information provided in the context of its review of the annual reports on the activities of each contractor. With regard to the implementation by the contractors of their plans of work, the Commission expressed its concern over the lack of raw data associated with resource assessment and

environment baseline studies. It noted that the lack of such data was an impediment to the assessment of activities in the Area by the Authority, such as the creation of a regional environmental management plan. The Commission made a number of recommendations in this respect, which were subsequently taken up by the Council and are reflected in document ISBA/17/C/20. With regard to financial expenditure, the Commission noted significant variations in reported financial expenditure between the contractors. It also reiterated the difficulty in making any evaluation of actual and direct exploration expenditure when the contractors had not followed the relevant recommendations for guidance. It also recommended that the programme of activities for the next five years for the six contractors entering the final five-year contract period should include an economic pre-feasibility study providing an indication of the level of returns that could be generated for any investment in the exploitation of nodules. Lastly, it suggested that the Secretariat should organize a meeting with contractors in which a specific provision would be included in the agenda to include financial appraisal as a component of future reporting.

7. Between November 2011 and May 2012, the Secretary-General, or his representative, sought to meet each contractor bilaterally to discuss the implementation of the plan of work in more detail, as envisaged in the Regulations. Meetings with the China Ocean Mineral Resources Research and Development Association, the Deep Ocean Resources Development Co. Ltd. and the Government of the Republic of Korea were held during official visits to those contractors, and meetings with the Federal Institute for Geosciences and Natural Resources of Germany and the Interoceanmetal Joint Organization took place in Kingston. An informal meeting with representatives of France, the sponsoring State of the Institut français de recherche pour l'exploitation de la mer, took place in New York. It was not possible to convene a bilateral meeting with Yuzhmorgeologiya. These meetings were useful in developing a better understanding of each contractor's exploration programmes, strategic objectives and achievements. They also provided an opportunity for the Secretary-General to convey to the contractors in more detail the concerns of the Legal and Technical Commission and the Council, in particular with regard to issues such as the provision of environmental baseline data and the future pace of activities in the Area, and for the contractors to respond to those concerns. The Secretary-General also received briefings from the contractors on the status of development of mining and processing technology.

8. It may be noted that, in January 2012, in response to the recommendation by the Legal and Technical Commission and the decision of the Council contained in document ISBA/17/C/20, the Secretary-General convened a meeting with the contractors to facilitate an exchange of views on data protocols and standardization. A separate report on the outcomes of that meeting is before the Legal and Technical Commission (see ISBA/18/LTC/3).

9. Following the bilateral meetings outlined above, the periodic reviews were concluded through exchanges of letters, as shown in the annex to the present report.

III. Considerations for the future work of the contractors

10. Some general comments may be made with regard to the implementation of plans of work for exploration by the contractors. As noted by the Legal and Technical Commission, the quality of information provided by the contractors in

annual reports to the Authority has improved considerably over recent years, with most contractors now following the standardized format and structure for annual reports recommended by the Commission in 2002. In general terms, the contractors have also improved their financial reporting so that it is more transparent and complies with the recommendations for guidance issued by the Commission in 2009. Furthermore, as a result of the meeting with the contractors held in January 2012, the Secretariat has received more raw environmental data from them and measures are being taken (subject to the availability of budgetary resources) to ensure that these data can be analysed, evaluated and standardized so as to facilitate the development of environmental baselines for the next phase of seabed mining.

11. It must be noted, however, that six of the current contractors are now embarking on the final phase of their initial exploration programmes. Contracts for exploration are issued for a period of 15 years, which is considered sufficient to explore an area, identify a first-generation mine site, develop an environmental baseline, test and evaluate mining technology and prepare an assessment of the environmental impact of such technology with a view to proceeding to exploitation. Although some contractors have made some progress with the development of mining and processing technology, there is little evidence of any sense of urgency or commercial development. Most programmes continue to be prolonged scientific research campaigns, without any commercial viability. For example, one contractor plans only a single cruise during the period, which will consist mainly of evaluating environmental data. Only three contractors propose to conduct an economic pre-feasibility study that is useful in preparing for the exploitation phase. No contractor has to date informed the Authority that it has decided to proceed to conduct test mining to evaluate the commercial and environmental risks associated with the mining and processing systems.

12. For the most part, as organizations sponsored and funded directly or indirectly by Governments through public funding, the current contractors have been engaged in providing scientific and technical support for marine mineral development in the same way as national geological surveys operate in undertaking baseline investigations of the terrestrial environment. The objective of these surveys is to lay the foundation for commercial exploitation of mineral resources by reducing the technical risk inherent in the evolution of a mineral project from prospecting into production. In this regard, it is notable that some of the contractors have also undertaken extensive pilot plant testing of marine minerals to determine optimum hydrometallurgical and pyrometallurgical extraction of the key metals, notably copper and nickel. The next step would logically be to encourage private-sector investment in the exploitation of marine mineral deposits and to undertake a preliminary economic evaluation of the feasibility of proceeding to exploitation, in addition to increasing the pace of activity related to the testing of collector systems.

IV. Recommendation

13. The Council is invited to take note of the status of exploration work being carried out by the contractors identified herein and to note the periodic reviews of seven plans of work for exploration.

Annex

Status of reviews as at 7 June 2012

Contractor	*Date of entry into force of contract*	*Date of expiry of five-year programme of activities*	*Date of submission of proposed programme of activities*	*Date of contract revision*
Interoceanmetal Joint Organization	29 March 2001	29 March 2011	4 April 2011	25 May 2012
Yuzhmorgeologiya	29 March 2001	29 March 2011	5 April 2011	28 March 2012
Government of the Republic of Korea	27 April 2001	27 April 2011	6 April 2011	5 April 2012
China Ocean Mineral Resources Research and Development Association	22 May 2001	22 May 2011	28 March 2011	7 June 2012
Deep Ocean Resources Development Co. Ltd.	20 June 2001	20 June 2011	29 April 2011	24 February 2012
Institut français de recherche pour l'exploitation de la mer	20 June 2001	20 June 2011	6 June 2011	Pending
Federal Institute for Geosciences and Natural Resources of Germany	19 July 2006	19 July 2011	6 April 2011	Pending